



DOCKET NO.: MS302099.1/MSFTP435US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicant: **Hagai Attias, et al.**
Serial No.: **10/600,798**
Filed: **06/20/03**
For: **VARIATIONAL INFERENCE AND LEARNING FOR SEGMENTAL SWITCHING STATE SPACE MODELS OF HIDDEN SPEECH DYNAMICS**
Art Unit: **2641**
Examiner: **Unknown**

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Pursuant to 37 C.F.R. §1.97 and §1.98, and in compliance with 37 C.F.R. §1.56, the Office's attention is directed to the patents, publications and other information listed on the attached PTO-1449. A copy of each listed document is enclosed except for: (a) pending applications; (b) those previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. §120; and/or (c) U.S. Patent(s) and published applications(s).

Serial No.: _____
Filing Date: _____

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):

- (a) Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
- (b) Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".

3. Pursuant to 37 C.F.R. §1.97(b) this Statement is being filed (one must be checked):

- (a) Within 3 months of the filing date or date of entry into the National Stage.
- (b) Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. §1.17(p) to Deposit Account No. 50-1063 for consideration of this Statement.
- (c) Before the mailing date of an Office Action after the filing of a request for continued examination under 1.114.

- (d) After the period set forth in 37 C.F.R. §1.97(b) but before the mailing date of either a final action or a notice of allowance.
- (1) The required certification is given below, or
- (2) Regarding the fee set forth in 37 C.F.R. §1.17(p) for consideration of this Statement :
- (i) Enclosed is a check covering the fee;
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4. Certification (if applicable)

- (a) The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.
- (b) The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than 3 months prior to the filing of this Statement.

5. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1063.

Respectfully Submitted,

By 
Himanshu S. Amin
Reg. No. 40,894

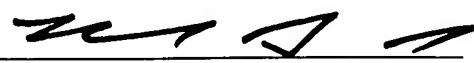
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CERTIFICATE OF MAILING

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

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of

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| Complete If Known | |
|------------------------|-----------------------|
| Application Number | 10/600,798 |
| Filing Date | 06/20/03 |
| First Named Inventor | Hagai Attias |
| Art Unit | 2641 |
| Examiner Name | Unknown |
| Attorney Docket Number | MS302099.1/MSFTP435US |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|--------------------|-----------------------|---|----------------|
| | | M. OSTENDORF, V. V. DIGALAKIS, and O. A. KIMBALL, From HMMs to Segment Models: A Unified View of Stochastic Modeling for Speech Recognition, IEEE Trans. Speech Audio Process, Vol. 4, No. 5, 1996. pp. 360 - 378 | |
| | | Z. GHAHRAMANI and G. E. HINTON, Variational Learning for Switching State-Space Models, Submitted to Neural Computation, Vol. 12, 2000. pp. 831 - 864 | |
| | | H. B. RICHARDS and J. S. BRIDLE, The HDM: A Segmental Hidden Dynamic Model of Coarticulation, Proc. ICASSP, Phoenix, 1999, pp. 357 - 360 | |
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| | | V. PAVLOVIC, B. J. FREY and T. S. HUANG, Variational Learning in Mixed-State Dynamic Graphical Models, in Proc. UAI, Stockholm, 1999, pp. 522 - 530 | |
| | | L. J. LEE, P. FIEGUTH and L. DENG, A Functional Articulatory Dynamic Model for Speech Production, in Proc. ICASSP, Salt Lake City, 2001, pp. 797 - 800 | |
| | | J. Z. MA and L. DENG, A path stacked algorithm for optimizing dynamic regimes in a statistical hidden dynamic model of speech, Computer, Speech and Languages, Vol. 14, 2000, pp. 101 - 114 | |
| | | L. DENG and J. MA, Spontaneous speech recognition using a statistical coarticulatory model for the vocal-tract-resonance dynamics, J. Acous. Soc. Am., Vol. 108, No. 6, 2000, pp. 3036 - 3048 | |
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| Examiner Signature | Date Considered |
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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